

"Dedicated to Public Service"

THE RADIATOR



W6RHC

IRL #8170



www.gearsw6rhc.org

P.O.Box 202 Chico, CA 95927-0508

Founded: August 13, 1939

June, 2018

Coming Events

O.A.R.S. GENERAL MEETING Second Friday, of month, 7:00 p.m., at St. Paul's Church Parrish Hall, 1430 Pine St., Oroville

G.A.R.S. Second Thursday of month, 6:30 p.m. Lutheran Church Hall, Artois; .

G.E.A.R.S General Meeting, third Friday of month, Butte County Search and Rescue Bldg., Chico. Social hour 6:00, meeting at 7:00.

Board Meetings: 2nd Saturday of each month at the Blood Source Building

Butte A.R.E.S. MEET: fourth Friday, at Butte County Search and Rescue Building.

FCC EXAMS - GEARS VEC First Sunday of every even numbered month.

At the Butte County Search and Rescue Building, Written test at 2:00 p.m. For information or pre-registration call Tom Rider -W6JS; 530-893-9211

**Club Events: News and items of interest
GEARS Calendar...all inside.**



Picture courtesy EVARC

The Prez' Says:

GEARS annual ham radio auction was, as always, a sterling success...everybody was a winner. The photos inside help to tell the story and are through the courtesy of Gene Wright-WA6ZRT.

Also, K6FAV-Kathy Favor, our Treasurer, has provided her report.

Field Day is the last full weekend of this month, June 23, 24th. We are fortunate to host this event, often referred to as "Ham's Open House Day", at the Masonic Center on East Avenue. This wonderful location allows easy access with lots of parking spaces for members as well as citizenry who may just drop in learn a little about Ham radio.

Ham stations will be set up for all to try !

Last year it was quite hot and I expect this year will be quite warm also. However we are fortunate in this particular location, due to the cemented and covered "patio" area (huge) where our equipment, radios, beverage coolers, food, barbeques, fans, are nicely situated. Our only lack was turnout of members. Please try this year to at least stop by to spend some time with your fellow dedicated Hams.

Thank you!

73

Tom Rider W6JS

President, GEARS

rustyboy rider@aol.com



GEARS Merchandise: Message from Kathy Favor, K6FAV:

The GEARS new club shirts are now available! These are Polo style, made in a very nice lightweight (wicking) fabric, dark blue with gold lettering. You can order with or without a pocket. The shirt will have a small GEARS logo on the front, a large GEARS logo on the back. It will include your first name and call sign. The basic shirt (sizes S, M, L, XL) is \$20. Please add \$1.50 for size 2X; \$2.00 for size 3X; \$2.50 for size 4X, and for a shirt with pocket add \$2.00.

Club hats are also available. The hats are black with gold lettering and include call sign and first name, at a reasonable cost of \$15.

Club Badges are magnetic badges, red with white lettering which states your call sign, first and last name, amateur radio operator, and GEARS Chico.

My badge is shown below as an example:

I previously e mailed all members this information with an order form attached, giving all the details and pricing. If you can order by Friday, June 8th to have your shirt in time for Field Day! (June 23rd - 24th)

You can mail your order to P O Box 202, Chico CA 95927 or order online at the club website (www.gearsw6rhc.com). Click on the link "Membership Dues and Products" on the left side to get to the order page.

73's to All!

Kathy Favor

K6FAV

530-864-2742





2018 GEARS Equipment Auction	
Total Sales	\$3,604.20
To Chuck Alldrin's Family:	\$2,165.40
To Other Consignments:	\$33.00
GEARS Total	\$1,405.80
GEARS donation to ARES	\$702.90
GEARS Net	\$702.90



VEC TESTING ON JUNE 3

The testing was offered at the Raley's Store Conference Room as Search and Rescue was not available for this date.

Four individuals tested, three, Steven Harvey, Luke Gebiche, and Steven Kunde passed their Technician tests, and Michael J. Clow, upgraded to General Class.

Congratulations All!

DO YOU HAVE OLD QST MAGAZINES IN SEARCH OF A NEW HOME?

Gene Wright has that future home for your QSTs, through his project to place QST Magazines in professional offices throughout Chico.

Labels placed on the QST's will advertise the Golden Empire Amateur Radio Society, encourage the readers to consider Ham Radio as an interesting hobby, one of not only fun, but which provides opportunities for many and various community services.

Bring your QST's to Gene at the Club meetings or contact:

Gene -WA6ZRT-530- 345-3515.

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VEC Testing is offered on the First Sunday of every even numbered month commencing at 2:00 p.m. the VEC testing dates for 2018 are:

August 5;

October 7;

December 2.

Candidates for an amateur radio license must bring with them the Following:

A photo identification, plus one other form of identification. If the candidate is upgrading his/her Amateur license a copy of the individuals existing amateur license must be provided.

Caps embroidered with your name and your call sign may be ordered by contacting

*WA6ZRT-Gene
Telephone
#530 -345-3515*



VEC TESTING

2:00 p.m.

August 5, 2018

Test Site

Search & Rescue Building

All Classes , Technician, General and Extra.

Contact:

Tom Rider-W6JS

530-893-9211

rustyboy rider@aol.com





GARS
Glenn Amateur Radio Society

KJ6HCG



September 8, 1100 to 1500 hours

**GLENN AMATEUR RADIO SOCIETY
HOSTS THE TRI COUNTY
STEAKBAKE THIS YEAR!**

**We are anticipating great weather
Really great steaks—delicious food
Pleasant conversations—the tradi-
tional fox hunt—a raffle of a truly
fine radio—**



AT-D868UV, dual
band, digital/analog



**We want every one of you who come to have as much
pleasure during the day as we are having putting this
steakbake together for you!**

**So make your reservations early please. Without a
reservation for your steak, hotdogs, hamburger, veg-
gie burger, whatever your choice, you could come and
find you have an empty plate! OUCH!**

**Steakbakes are always fun, pleasant gatherings. We
look forward to all of you being with us**



Mike Ellithorp, KF6OBI, GARS President

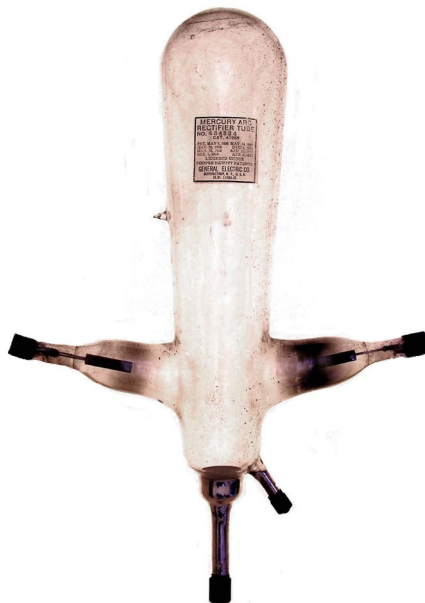
The Arc Rectifier

Early in the last century, there was a combination of DC and AC voltage equipment being used in the World. In the US, the advantages of AC over DC lighting was finally established, but many cities were using the old DC lighting equipment installed by Edison. In 1902, Peter Cooper Hewitt discovered that a vacuum tube with an AC anode and a negative cathode made from a pool of mercury would act as a very efficient rectifier. Once the mercury was made partially into its vapor phase, the conduction would continue. The problem was getting the arc going as there was no heating circuit and everything was in a vacuum. One common solution was a mechanical machine that would rotate the bulb until the mercury made contact with a positive electrode. The bulb was then rotated back into position. Any interruption in the input voltage would stop the rectifier and it would have to be tilted again. Large units could be 1, 3, 6 or 12 phase. The multi phase units provided well-filtered DC.

These units were commonly used in lighting and very large DC supplies like those used for electric trains. My grandfather turned in his horse for an electric streetcar in the Netherlands back about 1910. Larger units were made to handle up to a million watts. By 1920, the vacuum tube rectifier had been developed, but large transmitters were still a problem as the available tubes were small. Hams could get used ARC rectifiers and old pole pigs, so the age of QRO was started. The hams developed solutions to the “keep alive” problems including large relays to tilt the bulbs and using Model “T” spark coils to provide a constant low current voltage to keep the reaction going. Today those few rectifiers that have survived are feared by museums due to the large pool of mercury.

Visit the museum at N6JV.com

Norm N6JV



AND THIS IS??

EFFECTIVE RADIATED POWER (ERP),

..synonymous with equivalent radiated power, is an IEEE standardized definition of directional radio frequency (RF) [power (EIRP) transmitted from a theoretical dipole antenna. It is differentiated from effective or equivalent isotropic radiated power (EIRP) mainly by use of relative antenna gain instead of absolute gain in the calculation. In the case of ERP, antenna gain is calculated as compared to the maximum directivity of a half-wave dipole antenna, whereas EIRP is calculated using antenna gain referenced to an ideal isotropic radiator, otherwise known as “absolute” gain. The term “antenna gain” is assumed to be absolute (referenced to isotropic) unless specifically stated to be relative. The gain is then multiplied by the power actually accepted by the antenna to result in the actual ERP value (or EIRP). Power losses which occur prior to the antenna, e.g., in the transmission line or from inefficiency in the generator itself are therefore not included in the calculation of ERP or EIRP.

Next : And this is?

ANTENNA GAIN AND DIRECTIVITY

Antenna gain is closely related to directivity and often incorrectly used interchangeably. However, gain is always less than directivity by a factor called radiation efficiency. Whereas directivity is entirely a function of wavelength and the geometry and type of antenna, gain takes into account the losses that always occur in the real world. Specifically, accelerating charge (time varying current) causes electromagnetic radiation per Maxwell's equations. Therefore, antennas use a current distribution on radiating elements to generate electromagnetic energy that propagates away from the antenna. This coupling is never 100% efficient (by Laws of Thermodynamics), and therefore antenna gain will always be less than directivity by this efficiency factor.

Next Issue: of “AND THIS IS”“Dipole vs. isotropic radiators”

Club Officers: (Board of Directors)

PresidentTom Rider ,W6JS
Vice President..... Jim Matthews, K6EST
Secretary Steven Wright,KM6DBS
Treasurer..... Kathy Favor, K6FAV
Past PresidentLarry Marcum, KA6GND
DirectorGene Wright, WA6ZRT
Director.....Michael Favor-N6FAV
Director..... Dale Anderson, KK6EVS

Club Meetings:

General Meeting Third Friday 7:00 PM

Board Meeting Second Saturday

GEARS Club Net

Tuesdays 7:30 PM 146.850 MHz-PL 110.9

GARS Club Net:Monday,7:00 pm 147.105+Mhz
PL 110.09

Thursdays Simplex Net 7:30 p.m. 146.52

Sacramento Valley Traffic Net

Nightly 9:00 PM 146.850 MHz-PL 110.9

ARES Nets:

Butte Mondays 20:00 146.850 MHz-PL 110.9

Yuba Sutter Thursdays 19:00 146.085+MHz PL 127.3

Glenn Thursday 19:30 147.105 MHz +PL 100.0

Other Nets:

Willie Net 8:00 PM Mondays 1930 kHz

Sac Valley Section Net—7:00 PM 2nd Wed of the
month 146.085 MHz+PL 127.3

440 Wed. Night 8:00 PM Wednesday 440.650 MHz
Golden Bear 7:00 PM Daily 3975 kHz Western Public
Service System (WPSS)

7:30 PM 3952 kHz

ARISS (*International Space Station*) Uplink 144.490
MHz Downlink 145.800 MHz

Hope-1 satellite: all uplinks are in 145Mhz band:

All downlinks are in 435Mhz band

...California Traffic Net: 3906 KHz nightly @6:00
pm .For traffic listing & @6:30 p.m. for roll call.

The GEARS Newsletter Staff:

Editor and Publisher.....Dorothy Post

Printing & Distribution snail mail: Evelyn Weir

Website...Michael Favor-N6FAV

The Radiator is a monthly publication of the Golden
Empire Amateur Radio Society (GEARS). It is the poli-
cy of the Editor to publish all material submitted by
the membership provided such material is in good
taste, relevant to amateur radio, of interest to GEARS
members, and space is available. Please send all sub-
missions to the Editor – Dorothy Post by the last
day of the month through the following medi-
um: E-mail: dj@posthouse.us

2018 GEARS MEETING DATES:

THIRD FRIDAY MONTHLY

June 15

July 20

August 17

September 21

October 19

November 16

December 21

Gears Board Meetings

Second Saturday each month

June 9

July 14

August 11

September 8

October 13

November 10

December 8

2018 GEARS Meeting Snack Sign-up

Meeting Date	Volunteer(s)
Jan 19th	Ida Marcum
Feb 17th	Gene Wright
Mar 16th	Robert Rentz
Apr 20th	Kathy Favor
May 18th	Steven Wright
Jun 15th	
Jul 20th	
Aug 17th	
Sep 21st	
Oct 19th	Tom Rider
Nov 16th	Dale Anderson
Dec 21st	Potluck Desert (Everyone)

Note that 4 meetings are going hungry! Please rescue them from
guaranteed starvation!!!!



Date	Time	Event	Location	Contact party
Sunday August 5, 2018	2:00 p.m.	VEC—Exams	Butte Co. Search & Rescue Building 2591 Morrow Lane, Chico	Tom Rider, W6JS 530 893-9211 rustyboy rider@aol.com
Thursday June 14, 2018 Second Thursday each month	6:30 p.m.	GARS Glenn Amateur Radio Society	Lutheran Church Hall, March Artois,	Mike Ellithorpe 530-518-3730
Friday, June 15, , 2018 Second Friday each month	General Meeting	OARS Oroville Amateur Radio Society General Meeting	St Paul's Church Parrish Hall 1430 Pine Street Oroville	Ron Osborne-kd7uhf 530 589 1834 kd7uhf@yahoo.com
Saturday June 9 Second Saturday Each month	Board meet: 9:00 a.m.	GEARS Board of Di- rectors Meet Members are Invited!	Blood Source Blood Source Bldg 555 Rio Lindo Ave	Tom Rider, W6JS 530 893-9211 rustyboy rider@aol.com
Friday June 15, Third Friday each month.	Open 6:00 p.m.	GEARS Golden Empire Amateur Radio Society	Butte County Search and Rescue Building 2591 Morrow Lane Chico	Tom Rider, W6JS 530 893-9211 rustyboy rider@aol.com
Saturday, June 30, 2017	GEARS Breakfast	GEARS Saturday Breakfast Funtime	<i>Farmers Skillet Restaurant: Corner of Río Lindo & Cohasset</i>	Tom Rider, W6JS 530 893-9211 rustyboy rider@aol.com

Bring Your Old Eyeglass Wear to GEARS for the
LIONS Club Eyeglasses donation Box
Prescription glasses, or magnifying eyeglasses, sunglasses, but no loose lens—frames are a necessity.
This is a club community effort in which all members may participate with minimal effort.

